

On the photosensitive layer was coated a 3% by weight aqueous solution of polyvinyl alcohol (saponification degree: 98%, polymerization degree: 500) so as to have a dry coating weight of 2.5 g/m², and dried at 120°C for 3 minutes to form an overcoat layer layer, whereby a photosensitive lithographic printing plate was prepared.

The photosensitive lithographic printing plate was subjected to scanning exposure of solid image and dot images of from 1 to 99% (every 1%) using an FD-YAG laser (Plate Jet 4 manufactured by CSI Co., Ltd.) in an exposure amount of 100 μJ/cm² at 4,000 dpi under condition of 175 lines/inch, and then subjected to standard processing using an automatic developing machine (LP-850P2 manufactured by Fuji Photo Film Co., Ltd.) provided with Developing Solution 1 shown below and a finishing gum solution (FP-2W manufactured by Fuji Photo Film Co., Ltd.). The condition of pre-heating was such that a temperature of the plate surface reached was 100°C. A temperature of the developing solution was 30°C and a period of immersion in the developing solution was about 15 seconds.

Developing Solution 1 had the composition shown below and the PH thereof was 11.5 at 25°C and the electric conductivity thereof was 5 mS/cm.

<Composition of Developing Solution 1>

Potassium hydroxide	0.15 g
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Polyoxyethylene phenyl ether (n=13)	5.0 g
Chelating agent (Chilest 400)	0.1 g
Water	94.75 g

EXAMPLES 2 TO 5

Each lithographic printing plate was prepared in the same manner as in Example 1 except for changing the developing solution used in Example 1 to each of the developing solutions shown in Table 1 below.

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TABLE 1

Example 2	Example 3	Example 4	Example 5
Potassium hydroxide 0.15 g Polyoxyethylene 5.0 g phenyl ether (n=10) 0.1 g Chilest 400 94.75 g Water	Potassium hydroxide 0.15 g Polyoxyethylene 5.0 g naphthyl ether (n=10) 0.1 g Chilest 400 94.75 g Water	Potassium hydroxide 0.15 g Triethanolamine 1.35 g Polyoxyethylene 5.0 g phenyl ether (n=12) Chilest 400 0.1 g 93.4 g Water	Potassium hydroxide 0.2 g Polyoxyethylene 5.0 g phenyl ether (n=10) Anon IG 1.0 g Chilest 400 0.1 g p-tert-Butylbenzoic 1 g acid 92.7 g Water
PH: 11.8	PH: 11.7	PH: 11.9	PH: 12.3
Electric conductivity: 5 mS/cm	Electric conductivity: 6 mS/cm	Electric conductivity: 6 mS/cm	Electric conductivity: 8 mS/cm